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Spring Notes on the Birds of Santa Cruz Island, Cal., April, 1898.

BY JOS. MAILLIARD, SAN GERONIMO, CAL.

SANTA CRUZ Island is a long, narrow mountainous island lying south of Santa Barbara and distant 21 miles from the nearest mainland. Its length is 25 miles and its width varies from $1\frac{1}{2}$ to 5 miles. The coast line is exceedingly irregular and precipitous, with very few portions of the actual shore accessible from the land side. The island is very rough and jagged, principally volcanic with ranges of hills and rocks in every direction, attaining in places an elevation of over 2,000 feet. It is broken by many canons, most of which are deep and the sides almost invariably steep. In spite of the heavy backbone of volcanic rock, quite a large proportion of the island is composed of grass and brush land, there being large open areas of grass and thousands of acres of impenetrable chaparral, together with great tracts of sage brush, sometimes intermingled with cactus. In places are numerous live oaks, varying in size from scrub oaks to noble trees. The open portions contained but few birds and most of the specimens collected were obtained by crawling up the bottoms of canons containing a little water, keeping a sharp lookout for cactus, into which birds when shot would often most exasperatingly roll. In regard to this vegetable abomination, while it exists only in certain areas it really seemed as if there were not a spot on the whole island where one could put a hand on the ground, kneel or fall down, without coming in contact with a piece of the stuff which had been rolled, blown or been carried there.

The first place visited was Scorpion Harbor on April 5, 1898, a small cove on the east end of the island. This little bay is the mouth of a narrow valley some miles in length, but which becomes in reality only a rocky canon about a mile and a half back from the shore. The ranch buildings—old adobes mostly—are situated 200 yards from the little beach at a point where the rocky hills appeared to almost close together, the valley widening immediately back

of them. There seemed to be a sort of "draw" at this spot and the wind howled most of the time night and day. The landing was made about four o'clock in the afternoon and the first birds seen were House Finches and Rock Wrens (*Carpodacus mexicanus frontalis*? and *Salpinctes obsoletus*) quantities of the former, and quite a number of the latter singing most musically from the rocky sides of the gorge.

On the way over from Santa Barbara no sea birds were seen except a few Shearwaters, Western Gulls and some Cormorants, with an occasional Scoter. About a mile east of Scorpion Harbor is a large square-looking rock near the shore which is evidently a breeding place for the Gulls and Cormorants. The country within a mile or two of this harbor is mostly grass land, with little or no brush and but few trees, cut up by many canons and gullies with exceedingly steep sides. The tops of the adjacent hills and some of the more rolling slopes were the abiding places at this time of numerous Island Horned Larks (*Otocoris alpestris insularis*), some thirty of which were captured. From the fact that some of these birds contained eggs almost ready to be laid it was evident that they were nesting, but hours of patient search failed to reveal a nest. The birds would flush from small hollows, from the shadows of small rocks, tufts of grass, sides of trails etc., but no sign of a nest could be found. After most carefully exploring three localities in the neighborhood where the birds were very numerous, without success, I came to the conclusion that their feeding and nesting grounds were not the same, and the latter remained undiscovered.

Many Intermediate Sparrows (*Zonotrichia leucophrys intermedia*) frequented the corrals and yards, but were mostly in a sadly moulted plumage, preparing for their spring migration. Some groves of eucalyptus trees planted further up the valley were the dwelling place of quite a number of birds common to

the mainland, such as Allen's Hummingbird (*Selasphorus alleni*), Anna's Hummingbird (*Calypte anna*), Lawrence's Goldfinch (*Spinus lawrenci*), Arkansas Goldfinch (*Spinus psaltria*), Western Chipping Sparrow (*Spizella socialis arizonæ*), Western Flycatcher [which has been separated into a new species by Oberholser in the *Auk*, Vol. XIV, No. 3, July, 1897, and designated as *Empidonax insulicola*. This has not yet been allowed by the A. O. U. Committee. It was commonly heard on the island, but during my stay was very shy and seldom seen] and two pairs of Shrikes, one of which was building, while the other was already occupying a nest. This latter was inaccessible in a tall slim gum sapling and the bird would always slip off and disappear among the trees before more than a glimpse of it could be had. This Shrike has been separated by Mearns and stands in the list as *Lanius ludovicianus anthonyi*, Island Shrike, the type being taken from the Santa Cruz Island.

Naturally enough a sight of the Santa Cruz Jay (*Aphelocoma insularis*) was eagerly desired, but it was some days before one was seen. There were no Jays within a mile or two of this harbor but some were found where the first brush commenced on the steep hillsides toward the head of Scorpion Canon. In fact they were quite numerous among the brushy hills but were very difficult to approach, more from the nature of the ground than from their wariness, though they were here comparatively shy. Their harsh notes could be heard on all sides among the bushes, but seldom near enough to shoot. Two were taken at last in the canon, but all the rest that fell to my lot were captured at Laplaya. The notes of this Jay are much harsher than those of the California Jay (*Aphelocoma californica*), the screech being more like that of *Cyanocitta stelleri* and the bird much larger and of brighter and deeper plumage.

At the head of this canon an occasional Towhee (*Pipilo maculatus oregonus*) or a closely allied form, was heard and one taken, but they were exceedingly wild and difficult to obtain. Scattered all through the cactus, among the vol-

canic rocks in this part of the island, were numbers of Mockingbirds (*Mimus polyglottos*) singing most melodiously, while an allied form of Vigor's Wren (*Thryomanes bewickii spilurus*) could be heard piping away every few yards. This wren has been separated also by Oberholser but as yet provisionally. These birds were also very difficult to obtain as they mostly frequented the the very steep rocks among the cactus and when a specimen was shot at it was usually impossible to find it and often even to reach the spot where it fell. In fact only a few were taken, as at least two-thirds of those killed were not recovered. A few Dusky Warblers (*Helminthophila celata sordida*) were found in this part of the canon and several taken. Their note is much longer and stronger than that of the Lutescent Warbler (*H. c. lutescens*) and has two more and louder notes at the end of the trill. The song of *Thryomanes* seemed to be also different from that of *T. bewickii spilurus*, for while the latter has quite a variety of actual songs, the Santa Cruz Island species has only one and this sounded somewhat unfamiliar.

While prospecting among the rocks an occasional Bald Eagle (*Haliaeetus leucocephalus*) would swoop down near one though seldom within shot. In fact the only shot I could have taken was in a place so rough and so far from headquarters that it would have been a difficult undertaking to carry the bird in and its life was spared. A week was spent in prospecting and exploring around Scorpion Harbor and on April 12 the move was made for Laplaya, or the main ranch. There being no wagon road the trip was made on horseback, the baggage going by schooner. Owing to adverse winds the latter did not show up at Prisoner's Harbor for three days,—a rather unpleasant contingency. As it was to be a long, rough and hot ride—100° in the shade—even the gun was sent by schooner. However nothing was seen in the four hours' ride that was to be regretted, and in fact very few birds of any kind were to be found on the tops of the ranges. The trail led over and along the backbone of the island which in that part attains an elevation of 2,000 feet, with the sea

hardly half a mile away on either side, with San Nicholas and Santa Barbara Islands in plain view in the distance. In some spots a stumble would have meant a sudden and permanent loss of interest in ornithological affairs, to put it mildly.

The main ranch, or Laplaya, is situated in a pleasant valley three miles north of Prisoner's Harbor, being connected with it by a wagon road along the bottom of the creek. The buildings face a magnificent range of volcanic mountains which are broken and rugged in the extreme. At this place birds were more numerous than at any other spot on the island. Here in the creek bottom were groves of very fine live-oaks with a small stream of water running through them, and many birds came down from the almost perpendicular hillsides to feed and drink here. Back of the buildings a range of impenetrable chaparral extended for miles, with here and there a trail cut through for driving sheep. This range is so steep and brushy that even with twenty experienced vaqueros only about one-half of the sheep occupying it are ever shorn and there are thousands of these animals roaming around with one, two or three years' fleeces on their backs, their long tails flapping behind them as they run, in a most comical manner. In this chaparral birds were very scarce, but along the edges were many Jays and a few Bush Tits, Dusky Warblers, Western Chipping Sparrows and Oregon ? Towhees, these latter so wild as to be unapproachable. Among the liveoaks, however, birds were numerous and an early morning tramp with a good deal of patience thrown in would generally be rewarded, though a dozen birds actually in one's hand by ten o'clock would be a pretty fair record, as it was not only difficult to get shots at what one wanted but also frequently more difficult to retrieve the game.

Dusky Warblers, Vigor's ? Wrens and many of the commoner birds already mentioned could be heard and often seen along the steep sides of the canon and to a certain extent among the big trees in the bottom also. In these thick live-oaks it was very hard

to get shots at the small birds and many dropped only to lodge in some indiscernable or inaccessible bunch of leaves. In this locality the Santa Cruz Jay was very abundant and bold. Many were shot with the auxiliary barrel, being too close to use a larger charge. In some particular trees these birds would at times be very numerous, flying singly, by twos or threes, and then again hours might pass without a Jay being seen. Every accessible bush and tree within two or three miles of Laplaya was carefully searched for their nests, but, while many old ones were discovered, only five were found occupied. Two of these contained eggs, one set of three eggs and one set of four; two contained young, two fledglings in one nest and three in the other, while the fifth nest was placed near the end of a long slim branch of a large live-oak, with no means of reaching it. From the small proportion of new nests to old ones discovered, it would seem that either the birds were not breeding to any extent this year on account of the severe drouth perhaps, or else nests when once built must last in that locality about 100 years before disintegrating.

The Dusky Warblers and Vigor's ? Wrens were evidently breeding everywhere, but no nests were found and it is a mystery where the former found a place to build, as the sheep had cut everything clean from off the ground and as high up as they could reach on the bushes during the rainless spring. There did not seem to be any protected spots on the ground where these birds could hide their nests in security among low vines or ferns as is their usual custom. Occasional flocks of White-throated Swifts (*Aeronautes melanoleucus*) would descend from their homes in the mountain fastnesses and circle high in air over Laplaya, but only one specimen was obtained and their breeding place remained undiscovered. Shrikes were numerous in this vicinity and contrary to the evidence given in the July *Auk*, were not really wild. A few were lost by my not using a sufficiently heavy charge in my desire to preserve the plumage as intact as possible, but many of the specimens shot fell into the large piles of dead brush which

they frequented extensively. On one of these brush piles three were bowled over at one shot and not one recovered. This pile was about six feet high and thirty feet across, the birds being in the center when fired at. While trying to find them, a nest of seven eggs was discovered and taken, but the birds had slipped down irretrievably. They must have been having some sort of a row over this nest when shot. Another nest containing six eggs of this species was taken and one or two found which were not completed when I left.

Song Sparrows, recently identified as *Melospiza fasciata graminea*, were frequently heard around the vegetable garden at Laplaya and often seen. This garden was surrounded by a very thick trimmed hedge of cypress which was the abiding place of these birds. A singular feature in connection with this sparrow was the fact that although shot as soon as they appeared in this garden, there would be two or three more in a day or so, and yet none were found anywhere else in the vicinity or on the whole island, except on a small creek some seven or eight miles from Laplaya, where one or two were seen. I was especially desirous of obtaining a number of specimens of the Towhee (*Pipilo maculatus* —) of the island, but they were too wild and wary. Only one pair were taken.

Some species of birds that one would naturally expect to find here were absent, such as Bluebirds, Chickadees, Wren Tits, Thrashers and Brown Towhees. No Owls or Woodpeckers, excepting Flickers, were seen or heard, nor had even the oldest inhabitant any knowledge of the presence of an Owl on the island, by sight or hearing. There was evidence that the island was visited, probably in winter, by some species of Sapsucker. Hutton's ? Vireos were found in places among the live-oaks and several were taken. Their notes and habits were the same as those found on the mainland but they differed slightly from *Vireo huttoni* in shading and average measurements. House Finches (*Carpodacus mexicanus frontalis*) were exceedingly numerous in some localities, but with the exception of the flocks congregated about the buildings,

were rather shy. Some were nesting in the vines around the house and barns but no completed nest was found by May 1. Mearn's description of a House Finch from the Santa Barbara Islands in the *Auk* (XV, July, 1898) includes some specimens from Santa Cruz Island. This has been acted upon favorably by the A. O. U. Committee and designated as *Carpodacus mexicanus clementis*. I took a number of House Finches in different parts of the island but found absolutely nothing that could not be matched in our collection from the mainland or in that of the California Academy of Sciences. Hence, if *C. m. clementis* is a resident of, or even a migrant to Santa Cruz Island, it must be of rare occurrence there and the *C. m. frontalis* which is so much in evidence must migrate in large numbers from the mainland to breed.

Three Western Blue Grosbeaks (*Guiraca caerulea lazula*) were found just back of the house in some sage brush on the day before I left the island, Apr. 30, and two males were taken. They must have recently arrived but whether they were migrating through or had come to breed is a matter of conjecture. No females were seen. In the grain fields on the top of a high mesa, one side of which was washed by the sea hundreds of feet below, some small sparrows were observed, but it was impossible to capture one as they were unusually shy. They would flush at a long distance, fly into the grass on the unplowed portions and then run so that they could not be marked. They probably belonged to the *Ammodramus* group, though they seemed even smaller than any of this group with which I am at all familiar.

Following is a list of birds observed during my stay:— *Bald Eagle (*Haliaeetus leucocephalus*); *Sharp-shinned Hawk (*Accipiter velox*); *Cooper's Hawk (*Accipiter cooperi*); *Western Redtail, (*Buteo borealis calurus*); *Duck Hawk (*Falco peregrinus anatum*); *Desert Sparrow Hawk (*Falco sparverius deserticolus*); Red-shafted Flicker (*Colaptes cafer*); *Vaux Swift (*Chætura vauxii*); White-throated Swift (*Aeronautes melanoleucus*); Anna's Hummingbird (*Calypte anna*); Allen's Hummingbird (*Selas-*

phorus alleni); Arkansas Kingbird (*Tyrannus verticalis*); Black Phoebe (*Sayornis nigricans*); Western ? Flycatcher (*Empidonax difficilis*); Island Horned Lark (*Otocoris alpestris insularis*); Santa Cruz Jay (*Aphelocoma insularis*); American Raven (*Corvus corax sinuatus*); Western Meadowlark (*Sturnella magna neglecta*); *Bullock's Oriole (*Icterus bullocki*); House Finch (*Carpodacus mexicanus frontalis*); Arkansas Goldfinch (*Astragalinus psaltria*); Lawrence's Goldfinch (*Astragalinus lawrenci*); * ? Sparrow (*Ammodramus* ?); Intermediate Sparrow (*Zonotrichia leucophrys intermedia*); Golden-crowned Sparrow (*Zonotrichia coronata*); Western Chipping Sparrow (*Spizella socialis arizonæ*); Oregon Junco (*Junco hiemalis oregonus*); Santa Barbara Song Sparrow (*Melospiza fasciata graminea*); Lincoln's Sparrow (*Melospiza lincolni*); Oregon Towhee (*Pipilo maculatus oregonus*); Black-headed Grosbeak (*Habia melanocephala*);

Western Blue Grosbeak (*Guiraca caerulea lazula*); Lazuli Bunting (*Cyanospiza amœna*); *Barn Swallow (*Hirundo erythrogaster*); Island Shrike (*Lanius ludovicianus anthonyi*); Hutton's ? Vireo (*Vireo huttoni* ?); Dusky Warbler (*Helminthophila celata sordida*); Audubon's Warbler (*Dendroica auduboni*); Mockingbird (*Mimus polyglottos*); Rock Wren (*Salpinctes obsoletus*); Vigor's ? Wren (*Thryomanes bewickii spilurus*); Californian Bush Tit (*Psaltia minimus californicus*); *Dwarf Hermit Thrush [*Hylocichla aonalaschkeæ*].

The species marked with an asterisk were seen but not taken. Those with an interrogation mark have been described but not yet separated by the A. O. U. Committee.

(Extract from a paper read before the Ornithological Section of the California Academy of Sciences, with some additions and alterations.)

A Successful Day with the Duck Hawks.

BY HENRY C. JOHNSON, AMERICAN FORK, UTAH.

[Read before the Northern Division of the Cooper Orn. Club, May 6, 1899.]

DURING May 1898 I happened to be riding among the foothills of the West Mountains in Utah, when, in circling the base of a precipitous cliff some eighty feet in height, a hawk of some kind suddenly launched into the air from a projecting point of rock. My friend pulled up his horse with the exclamation, "Duck Hawks!" A moment later we had tied the animals and flushed the female from her nest. Such an outcry did the old birds make and such a scramble did I have to reach the nest, as the face of the cliff was perpendicular and the trap rock was dangerously insecure for a foothold. Looking over the top of the ledge I saw three youngsters huddled together in a shallow cave under the over-hanging rock. This was enough and we left the locality with a mental memorandum that the nest would not be neglected by us in '99.

Thus it happened that Rollin and the writer might have been observed leaving town on two good mountain ponies on the 30th of March last. In circling Utah Lake we passed ponds on which were a goodly number of ducks of vari-

ous species and Long-billed Curlew wading around after food. But Ducks and Curlew had no temptations for us on this particular day. When in sight of the ledge I pointed it out to Rollin who was making his first trip to the locality. He remarked: "Pshaw, is that your great cliff: I will jump from the top when we get there." I advised him to remember that the altitude makes a slight difference in the appearance of objects. Another hour of steady climbing and we neared the foot of the precipice, where Rollin postponed his jump as he did not think it possible to reach the top of the cliff!

No birds were visible but we tied up the horses and a stone thrown from where we stood, brought the female off the nest. The male also jumped from a projecting rock and we were greatly interested in watching the birds. They had the ability of remaining apparently stationary in mid-air without flapping their wings. Suddenly, however, one or the other would make a dash for us, just missing one's head in passing; no wonder, we thought, were they locally known as "Bullet Hawks." Rollin